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Statistics of the Deaf and Dumb in Ireland. By W. R. WILDE, Esq.,
Assistant Census Commissioner for Ireland.

IN accordance with the request of the local secretaries, with the permission of the Lord Lieutenant, and the concurrence of his brother-commissioner, Mr. Donnelly, the following paper, embodying some of the results of the inquiry instituted, in connection with the census, into the number and condition of the Deaf and Dumb in Ireland, was laid before section F of the British Association.

In making arrangements for taking the census of 1851, the subject of the diseases of the living occupied the attention of the commissioners, and preparations were accordingly made by which a return was procured of all the persons who laboured under disease, either at their own homes or in public institutions, upon the night of the 30th of March. It was conceived that such a return would, when properly classified, present at one view not only the amount and distribution of disease, but the maladies to which the inhabitants of this country are most exposed at a certain period of the year.

Owing to the peculiar and anomalous circumstances of this country at present—arising out of the state to which it has been reduced since the summer of 1846—it is of great importance, in a social as well as a medical point of view, to form some just estimate of the diseased, and their proportion to the healthy. Famine, pestilence, and emigration, together with a falling-off in the number of births, have lessened the population by nearly one-fourth in five years, and from the number of adults lost to the country during the period specified, over and above the ordinary mortality of such persons, and the extensive emigration which is still going forward, the amount of the diseased in either mind or body, of the decrepid, aged, and infirm, as well as the orphan and the pauper, now thrown for support upon the resources of the country, will be found to bear an undue and unnatural proportion to the healthy part of the community in Ireland, when tested by the ordinary standard of disease in north-western Europe.

No similar attempt has, I believe, been yet made to collect and tabulate the diseases presented on a single day in even a limited portion of any other country.

The general return of the diseased may be divided into the *permanent* and the *temporary*; and foremost among the former stands deaf-muteism.

Until the present inquiry, no means worthy of credit have been adopted to discover the exact number of deaf mutes in the British Isles. Computations have been made by writers, and vague conjectures published upon the statistics of deaf-dumbness; but as the mode in which these inquiries were conducted has not been explained, nor the materials at the disposal of the individuals who undertook them exposed, no certainty can be felt as to their accuracy; and moreover, it is manifest that statistical investigations for an entire kingdom can only be effectually undertaken and properly carried out by the State.

In an inquiry of this description two great objects present themselves—a physiological and a social. Under the former head the deaf

mute may be classed among those afflicted with permanent disease, either congenital or acquired, and, as such, the subject demands the careful investigation of the vital statist; and all the causes and phenomena of the affection solicit attention equally with those circumstances attendant upon lunacy, idiocy, blindness, or any of the other persistent maladies which affect certain portions of the community in all countries. Under the latter head the deaf mute claims the special attention of the philanthropist, and the protection of the State, owing to the forlorn condition to which he is reduced by his affliction, the difficulty he experiences in expressing his wants, and his inability either to educate himself or receive instruction through the ordinary channels; and also to his constant exposure to crime, from the defect of moral training, and the difficulty of impressing upon him a just idea of right and wrong. Degraded by his uncontrolled passions, he is, moreover, frequently the victim of cruelty and injustice; and being incapable, without education, of properly understanding or duly appreciating the truths of religion, he is reduced to a condition but little elevated above that of the brute creation. Alone in the world, his faculties undeveloped, and shut out by his unhappy circumstances from thoroughly communicating his ideas to the rest of mankind, the deaf mute, in an especial manner, claims the sympathies of all. These latter considerations, however, are more the province of those whose duty it is to provide for such members of the community, as, either from their position in society or their afflictions, require the aid and interference of the State, and of all who would advance the cause of reason, religion, and humanity.

Viewed in a statistical aspect, the investigation of this species of permanent disease leads us to inquire into its extent and distribution, and, as far as possible, its causes also; its proportion to the general population, and the relative proportion of the sexes affected; the education, and susceptibility to education, both literary and industrial, of its victims; the class of the community which it chiefly affects; and the localities where it principally prevails: in order to see whether geological position, soil, aspect, elevation, humidity, dryness, salubrity or insalubrity of climate, density or paucity of population, unhealthy crowded cities, or open, fertile plains, acquired disease, hereditary predisposition, family peculiarity, or the consanguinity of parents, may have in any way conduced to its development and propagation.

Without entering into a minute explanation of the means by which this secondary census of the deaf and dumb was instituted, it will suffice to state that, from the kindly manner in which the inquiries were received by the community, and the readiness with which the information sought for was obtained, aided by the admirable organisation of the police force, the returns referring to this form of permanent disease are, in all probability, far more faithful and trustworthy than any heretofore presented for other countries.

Where any difficulty arose with respect to the true physiological or pathological condition of a case, the examination of a medical man was had recourse to; and it is highly creditable to the country practitioners of Ireland to state, that, although the opinion was requested gratuitously, it was almost invariably given in the cause of science and humanity.

True and uncomplicated muteism may be divided into two classes. The first is congenital, or that with which the patient is born; it is either functional or organic—in the latter case it usually arises from some defect of organisation, either in the mechanical apparatus of hearing, in the auditory nerve, or in the great nervous centre itself. The second class is that proceeding from disease acquired subsequent to birth, but which occurred so early in life that speech had never been fully acquired; or from the deafness being so intense, that speech was either entirely lost or greatly impaired in after life. In the latter class, the acquired disease, particularly if it occurs within the first few years of life, reduces the patient to the position of a mute equally with the former, and so places both in the same division in a social and statistical point of view; but as there are many topics of scientific interest appertaining specially to each class, they have, when necessary, been kept separate, and the calculations belonging to each are given in distinct columns in the several tables of the report. The information derived from the parents or friends, as to whether the person was born deaf and dumb, must be received with caution, as, in a great number of instances, the query is answered in the negative; the relatives and attendants being generally unwilling to admit the fact of congenital defect, and stating that they were sure the child heard well until it was twelve, fifteen, or eighteen months old, although it is not always possible, without special attention being directed to the subject, to form a decided opinion as to the amount of hearing possessed by an infant of such tender age. Upon a strict inquiry, however, it will generally be found that the premises do not warrant the conclusion that complete deafness did not exist at birth, the instances related being usually those in which the child noticed general vibration, such as that produced by a piano, &c., and not distinct sounds, like those of the human voice; and the more intelligent the class, the more likely are these opinions to prevail. All mutes are not totally devoid of hearing and, moreover, the visual power in that class being, at a very early age, called into special action, attention is often mistaken for hearing.

4,485 deaf mutes were returned for all Ireland, or 1 in every 1,461 inhabitants; but it results from calculations, into the particulars of which I do not propose to enter in this place, that the exact number of the deaf and dumb can never be estimated, from the difficulty of determining muteism under two years of age. Hence the Irish, as well as all other tables which have been constructed exhibiting the ages of the deaf and dumb, are defective, when tested by the ordinary standard of age in certain countries; and in Ireland, in particular, this disturbing cause acts with especial force just now, owing to the paucity of children under five years of age compared with the same class in 1841. Taking all the circumstances of the case into account, it is probable that the estimate for Ireland would be about 1 deaf mute in 1,500 inhabitants.

According to the most recently published tables, and the most authentic information that can be obtained, the proportion of deaf mutes to the population, in all Europe, is 1 in 1,593—a number bearing a great similarity to the Irish returns. The duchies of Luxembourg and Wurtemberg, and the kingdoms of Tuscany, Bavaria, Belgium, and Holland, possess the fewest, while Sardinia, Norway, and parts of Switzerland, exhibit the greatest number of deaf mutes in pro-

portion to their populations; the average of the former countries being 1 in 2,209, and of the latter, 1 in 641·9. In some of the Swiss cantons the proportion of the deaf and dumb to the population is as high as 1 in 206, and in those localities it is generally combined with cretinism and idiocy. In a country like Ireland, completely insulated, limited in extent, and possessing great sameness of surface, one would not expect that the proportion should alter very much in the different provinces and counties; still we find the following variations:—In Leinster, 1 in 1,794; Connaught, 1 in 1,689; Ulster, 1 in 1,487; and in Munster, 1 in 1,469. Deaf-dumbness, arising from all causes, prevails most in the rural, and least in the civic portions, or those towns whose inhabitants amount to 2,000 and upwards, exclusive of workhouses. Thus there are fewer cases in proportion to the population to be found in the towns of Drogheda, Carrickfergus, Galway, and Belfast, and the cities of Cork and Dublin, the average for these places being 1 in 2,384. Generally speaking, the flat campaign counties, such as Roscommon, Westmeath, Dublin, Meath, and Kildare, present the fewest cases; the average in these being 1 in 1,950; while Mayo, Limerick, Donegal, Waterford, and Wicklow, and also Tipperary, Tyrone, and Fermanagh, the five first lying chiefly on the seacoast, and the majority presenting mountain ranges, have a greater number of deaf and dumb, in proportion to their population, than the remaining counties, their average being 1 in 1,338, and in Wicklow the proportion is as high as 1 in 1,192. Leitrim, Clare, Down, and Antrim, are also high.

Of the total 4,485 mutes, 4,151 were deaf and dumb, 2,349 males and 1,802 females, and 334 were dumb but not deaf. Among the former class 3,325 were born so, and 400 became so after birth by accident or disease. In 267 instances the precise cause was uncertain or unknown, and in 159 cases the persons were at the same time paralytic, idiotic, or both. Among the latter class—the dumb, not deaf—131 were dumb only without other defect, 45 were paralysed, 115 idiotic, and 43 both paralytic and idiotic.

The sexes of the deaf and dumb from all causes, are as 100 males to 76·61 females; such being in accordance with the usual law which appears to regulate the sexes in this class. Among the congenital cases, the proportion is 100 males to 74·62 females; and in the acquired, it is 100 to 91·37—showing in the former an excess of males over and above the general proportion of that sex. It must, however, be remarked, that according to the present census there is an undue proportion of females above males in Ireland.

Among the sixteen tables inserted in the report, there are two which show, by ages and sexes, the occupations of the deaf mutes themselves, as well as the employment of their parents. The former, exhibited the great variety and extent of arts, trades, and handicrafts, upon which the deaf and dumb are capable of being employed, and the latter showed that the great bulk of the mutes in Ireland are derived from the agricultural and labouring classes.

Among the subjects discussed in this report is that of marriage and its results, as regards the offspring of deaf mutes. In 77 instances one parent was deaf and dumb, and in 5 instances both parents; from these marriages but two mute children resulted, one to each class. It

is remarkable that while muteism is often manifest in several members of a family derived from a common stock, the defect is seldom transmitted direct from parents to children; thus, according to the returns of the Hartford Institution, in the United States, we learn that out of ninety-one instances where both parents were deaf and dumb, there were only four cases in which the children were similarly affected.

Several tables have been constructed with a view of showing the number of mute children born to each family, and the proportion of the sexes, where there was more than one mute, the position in the family, whether first, second, or third child—in 2,962 instances—the result of hereditary predisposition, and the consanguinity of parents, as well as the causes of acquired deaf-dumbness and the ages at which the diseases or accidents producing such occurred. The state of education, and the number, locality, and date of erection of the several institutions for the instruction of the deaf and dumb in Ireland, as well as the mortality and causes of death, and even the particular races, whether Irish, English, or Scotch, to which the deaf and dumb belonged, were likewise described, all showing with what minuteness this interesting inquiry had been sifted.

The following are some of the results obtained:—2,512 families had one mute child; 287, two mutes; 127, three mutes; 32, four mutes; 8, five mutes; in 3 instances there were six; in 1 seven; and in 1, eight mute children, born of the same family of the same parents. Fourteen instances occurred of twins, in which one or both were mute; and families of six and seven had more frequently a mute child born among them than families of any other number. In every instance the male sex largely predominated, except in cases where the eighth child was deaf and dumb, and in these the sexes were about equal. In 154 instances the parents were related; and out of 281 cases in which the influence of hereditary predisposition in the production of congenital muteism was traced, it was shown that in 149 instances the taint descended through the father's side, and in 132 through the mother's. The family history had been traced back in several instances to the grandparents, and in a large number to the cousins and collateral branches.

Six cases were recorded of persons deaf, dumb, and blind, and a great number of instances were related of rare and remarkable cases, showing peculiar combinations of deaf-dumbness with other congenital or acquired defects.

As one of the chief objects in making statistical inquiries into the condition of the diseased, the destitute, or the helpless, is, that they may be either relieved of their infirmities, provided with proper institutions, or afforded the means of supplying their necessities, the subject of the education of the deaf and dumb was carefully investigated. It is unnecessary, for this purpose, to learn the ages of educated deaf mutes, but it is of great importance to know the ages of those who are still in a state of darkness, because to a large portion of these may still be offered the blessings of enlightenment, thereby not only increasing their happiness, but supplying them with an additional means of support. There were in Ireland, at the time of taking the census, 744 persons—409 males, and 335 females—either already educated, or receiving instruction in some of the establishments for that purpose.

The number of uninstructed deaf and dumb was 3,379 persons, neither idiotic, insane, nor paralytic—1,936 males, and 1,443 females—the total being in the proportion of 1 educated to 4·54 uneducated. The provincial summaries exhibit the following varieties:—In Leinster there is 1 educated in every 2·88 deaf and dumb; in Ulster, 1 in 4·07; in Munster, 1 in 6·68; and in Connaught, 1 in 6·92.

Among the counties, we find that the greatest amount of ignorance prevails in Kilkenny, Clare, Limerick, Donegal, and Fermanagh; and those in which the disproportion between the educated and uneducated was least, were the counties of Dublin, Tyrone, Westmeath, Londonderry, Meath, Antrim, Down, and Sligo. No fair deduction can, however, be drawn from these proportions, either as to the susceptibility to teaching, or the willingness to receive instruction upon the part of the mutes, or their friends, in the former counties, as the varying proportions are evidently due to circumstances appertaining to the means of acquiring instruction over which they could not exercise control. By far the greatest number of the educated resided in the cities.

The report is highly interesting as giving the history of the instruction of the deaf and dumb from the earliest period to the present time. The first educational establishment for the deaf and dumb in Great Britain, was that established by Thomas Braidwood, in 1760, and which is spoken of in terms of commendation by Dr. Johnson, in his *Tour to the Hebrides*.

To Dr. C. H. Orpen is due the credit of first drawing attention to the education of the deaf and dumb in Ireland.—By a series of public lectures delivered in Dublin in 1816 he enlisted the charitable sympathies of the benevolent, and eventually succeeded in establishing the National Association, together with the institution at Claremont, which has since that time been the great means of instructing the deaf and dumb in Ireland. 600 children have been educated there since its commencement. The next attempt was made in Cork by Dr. Kehoe in 1822, but it failed for want of funds in 1846. In 1826, the family of Archbishop Magee established the day-school of the Dorset Institution. Next in chronological succession we find the Ulster Institution for the Education of the Deaf and Dumb, and also the Blind of that province, which was commenced as a day-school, in 1831, by some benevolent individuals in Belfast. In 1836, a large building was erected, and boarder pupils admitted the following year; and in 1845 a much larger institution was built, at a cost of 10,000*l.*, contributed by public subscription.

In 1835, an attempt was made by Mr. A. Craig, of Kilrea, near Coleraine, who had himself four mute children, to establish a deaf and dumb institution; in this design he was subsequently assisted by the Mercers' Company, one of the constituent parts of the Irish Society. It was, however, relinquished in 1835. Ten children were educated thereat.

In December, 1842, Miss Wright, a benevolent lady, residing at Moneymore, established and has since supported, at her own expense, an institution for the education of poor mute children. The pupils therein are taught to carve in wood, and also learn crochet-work and other industrial arts.

In 1846, the clergy of the diocese of Derry and Raphoe subscribed

a sum of money, by which, with means previously collected by a lady in the vicinity, the Strabane Institution was established both as a day and boarding school.

In the same year the late William Nugent Skelley, Esq., the Very Rev. Dr. Yore, and the Rev. Mr. M'Namara, commenced the institutions of St. Mary, at Cabra, and Saint Joseph, at Prospect, in the vicinity of Dublin. The former, for females, was opened for the admission of pupils in 1847, and the latter, for males, in 1849. Preparatory to the reception of pupils into Saint Mary's Institution, which is under the direction of the sisters of the religious order of Saint Dominick, two of the ladies belonging to that establishment, together with two mute female children, were sent to the institution for deaf mutes of Le Bon Sauveur, at Caen in Normandy, in order to learn the mode of instruction taught at that celebrated establishment. The single-handed sign-alphabet, similar to that generally used on the Continent and in America, is the one taught in both these institutions. In almost all the other schools in Ireland the double-handed alphabet is employed. The Irish schools in general do not attempt to teach the pupils to articulate words.

From 1816 to 1849, a period of thirty-three years, seven schools, capable of containing 515 pupils, independent of those already alluded to at Cork and Kilrea, have been established, chiefly through the instrumentality of private individuals, and are altogether maintained by voluntary contributions. This is, we believe, a greater number than has been erected in any other portion of the United Kingdom, of equal extent and population, during a similar period. The entire number educated, or now in course of education, is 1,081. The period of instruction has been, on an average, five years; and the school age, or that during which the pupils are most susceptible of tuition, is from six to fifteen years. It is of great importance to fix this period, as it is generally acknowledged by the most experienced instructors of the deaf and dumb that, after a certain age, the generality of pupils are not susceptible of instruction.

In concluding the subject of the education of the deaf and dumb, the commissioners have suggested the propriety of ingrafting upon the system of National Education some institutions for the instruction of this class of the community.

The popular terms for deaf-dumbness are,—deaf and dumb—dummy—the silent people—mutes; and in the Irish, *Bodhar agus Balbh*—deaf and dumb. Some interesting instances of persons so circumstanced have been related in the Irish metrical romances and bardic histories. The Irish medical manuscripts of the sixteenth and eighteenth centuries abound with notices of diseases of the ear and deafness.

The subject of race, in so far as it affects the deaf and dumb, is another subject of great interest. It appears that out of 1,671 so afflicted, 1,198 were Irish, 352 English, and 121 Scotch. The last subject which falls to be considered is the mortality of the deaf and dumb. In 291 instances the cause of death was recorded, and we learn that 72 persons died of zymotic or epidemic diseases, of which fever, dysentery, and small-pox, were the most fatal; and 135 died of sporadic diseases. Consumption was the cause of death in 77 instances; it is not only the most frequent cause of death in this class, showing a proportion of 1 to

2·81 of the entire number of specified causes ; but the fact thus related confirms the opinion, that as deaf-muteism itself is frequently a variety of struma, so are the persons afflicted therewith more particularly predisposed to diseases of a scrofulous character in after life. 10 met with violent or sudden deaths : rather a large proportion, but one naturally resulting from the deprivation under which this afflicted class all suffer.

231 deaf mutes were resident in the workhouses of the various unions in Ireland, in March, 1851. 33 of these were educated—9 were under five years of age ; and 158 were from 15 to 40 and upwards, and consequently too far advanced in life to be instructed. Of the remainder 64 persons—40 males, and 24 females—were of the school age, or from 4 to 15, between which age a State provision is made for their education ; for according to the Poor Law Act, 6 and 7 Vict., cap. 92, s. 14, it is enacted—“That the guardians of any union may send any destitute person, deaf and dumb, or blind child, under the age of 18, to any institution for the maintenance of the deaf and dumb or blind, which may be approved of by the commissioners, with the consent of the parents or guardians of such child, and may pay the expense of its maintenance there out of the rates raised under the authority of the said first-recited Act.” As mute children, permitted to grow up in ignorance and poverty, must remain a permanent tax upon their respective unions, and as they cannot be properly instructed except in schools specially constituted for the purpose, we think it might be found an eventual economy to have them sent to some of the existing seminaries, that they may receive both a literary and industrial education.

Although the figures given in the foregoing paper are close approximations to the truth, nevertheless until the “Report upon the Status of Disease” (which will form Part III. of the general Census of Ireland for 1851) is ready for presentation to Parliament, some slight alterations may perhaps occur.

Having received from Dr. Peet, the superintendent of the institution for the deaf and dumb at New York, a letter containing the unpublished results of the American inquiry into the state of the deaf and dumb, in common with the blind, insane, and idiotic, on the authority of I. C. Kennedy, Esq., superintendent of the census, I have added it to this communication.

From it we learn that there were 9,422 *white* mutes in a population of 19,371,591 persons in the United States, according to the census of 1850, or 1 in 2,073 ; and but 96 of the same class among a *free coloured* population of 251,205, or 1 in 2,953. The number of blind among the former class amounts to 7,897. A comparison of the numbers of deaf and dumb, blind, insane, and idiotic, in the whole Union, with the population of the same colour and condition, gives the following proportions :—

	Deaf and Dumb.	Blind.	Insane.	Idiotic.
Whites	1 in 2,073	1 in 2,455	1 in 1,295	1 in 1,384
Free Coloured	1 ,, 2,956	1 ,, 867	1 ,, 1,355	1 ,, 983
Slaves	1 ,, 6,552	1 ,, 2,646	1 ,, 11,011	1 ,, 3,081
Total Slaves and Free Coloured....	1 ,, 5,730	1 ,, 2,131	1 ,, 5,936	1 ,, 2,461

It will be perceived from this that blindness is more prevalent, and deafness and insanity less frequent, among the coloured races than among the white. The proportion of insane among the slaves is remarkably small. Perhaps the returns of the idiotic among the slaves are defective, as their large proportion among the free coloured seems to show that idiocy is more common among the coloured races than among the whites. In a large body of slaves, those only partially idiotic, or deaf and dumb, might be forgotten or overlooked by the master or overseer (who filled the schedule), being, in many cases, still useful hands, while the blind and insane would be more likely to be remembered.

It appears that the deaf and dumb and the blind are most numerous in those States from which the emigration is greatest (the Central and New England), and least in those States whose population receive accessions from immigration—showing that comparatively few of these two classes of persons are carried along with the stream of emigration. In California, Utah, and Oregon (omitted in the foregoing calculations on account of their recent settlement and peculiar circumstances), where the population consists almost wholly of recent immigrants, there are only 6 deaf and dumb, and 2 blind, in an aggregate population of 184,370. New Mexico is also omitted in these calculations, its population being of a peculiar character, chiefly a mixture of Spanish and native Indian races, with but few Anglo-Americans.

On the Progress, Extent, and Value of Steamboat Building and Marine Engine Making on the Clyde. By JOHN STRANG, LL.D.

[Read before the Statistical Section of the British Association, at Belfast, 7th September, 1852.]

OF the many sources of progress and prosperity which have characterised Scotland, and particularly its western districts, during the last fifty years, there is, perhaps, none more conspicuous than the business connected with the construction of steam vessels and marine engines. This industrial interest, unlike that of the manufacture of cotton, of silk, or of wool, deals chiefly with articles of home produce, and exerts its labour and intelligence on materials which, in their primary condition, are the products of our own soil, and manipulated by our own workmen. It is a species of manufacture, too, which necessarily requires greater skill,